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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,916	05/15/2001	Richard J. Larson JR.	06155-063001	1138

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[REDACTED] EXAMINER

ZIMMER, MARC S

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1712

DATE MAILED: 04/29/2003

1)

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	09/855,916	LARSON ET AL.
	<b>Examiner</b>	<b>Art Unit</b>
	Marc S. Zimmer	1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 25 February 2003 .

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-4,9-16,18-20,23-26,35-38 and 43-94 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) 11,12,15,45,46,49,52-57,59-66,68-77,79,80,87-90,93 and 94 is/are allowed.

6)  Claim(s) 1-4,9,10,13,14,16,18-20,24-26,35-38,43,44,47,48,50,51,58,67,78 and 81-86 is/are rejected.

7)  Claim(s) 23,25,91 and 92 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)  All b)  Some \* c)  None of:

1.  Certified copies of the priority documents have been received.
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892) 4)  Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948) 5)  Notice of Informal Patent Application (PTO-152)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9, 10. 6)  Other: \_\_\_\_\_

### ***Claim Analysis***

It is noted that the compositions/articles of independent claims 1, 11, 15, 35, 45, and 49 feature, "a second material capable of extending polymeric chains" of the base polymer whereas independent claims 16 and 81 contain mention of no such structural feature in said base polymer. In connection with this observation, the Examiner would like to point out that there are several prominent structural configurations that siloxane polymers may adhere to:

- (i) linear,
- (ii) branched,
- (iii) resinous or 3-dimensional, and
- (iv) ladder type or polyhedral (polysilsesquioxanes).

Polysiloxanes having a structure consistent with (iii) or (iv) do not contain polymer chains per se hence the Examiner searched only for linear and/or branched silicones as base polymers when determining the patentability of the claims 1, 11, 15, 35, 45, 49, and the claims dependent therefrom. By contrast, the base polymer in the compositions of claims 16 and 81 are not bound by any such structural limitations. Therefore, a reference teaching a base polymer derived from, for instance, a mixture of alkyl-functionalized trialkoxysilane and phenyltrialkoxysilane may anticipate claims 16 and 81 but not claims 1, 11, 15, 35, 45, and 49.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-4, 9-10, 13-14, 20, 35-38, 43-44, 47-48, 50-51, 58, 67, 78, and 81-86 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. In paper no. 3, the Examiner had rejected claims 8 and 42 for their failure to state whether the recited ratio was being expressed as a weight- or molar ratio. In response, Applicant cancelled claims 8 and 42, but incorporated their subject matter into claims 1 and 35 respectively with the added stipulation that the ratio was a weight ratio. However, the Examiner cannot locate support for this aspect of the instant invention anywhere in the original disclosure. (On page 3, it is stated that the composition *percentages*, as in the percentage of the chain-extending material, is given as a weight percent but this parameter apparently does not apply to the ratio of phenyl groups to methyl groups in the base polymer. On the other hand, numerous embodiments of the base polymer are provided in terms of their CAS numbers on page 9 of the Specification. Applicant should supply structural information pertaining to these compounds so it may be ascertained whether support for Applicant's amendment lies in the mention of these compounds.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 9, 13-14, 16, 18-20, 24-25, 35-38, 43, 47, 48, 50, 81, 85, and 86 are rejected under 35 U.S.C. 102(b) as being anticipated by Koerner et al., U.S. Patent # 4,749,764. Applicant disputes the relevance of this reference on the basis that the claimed first material and the silicone resin are not equivalent. However, according to Applicant's specification at page 8, lines 14-15, the first material is,

any silicon-containing material with one or more pendent carbon group[s], e.g. a silicon resin. That is, the description does not explicitly exclude groups other than methyl and phenyl. Accordingly, the aforementioned claims simply contemplate a first material wherein the following requirements are met:

- (a) silicon atoms are present,
- (b) methyl and phenyl groups are present, and
- (c) the ratio of phenyl- to methyl groups in the material is between 0.4:1 and 2.1:1.

Indeed, a phenyl methyl silicone resin is not explicitly defined anywhere in the disclosure by way of formulaic representation or otherwise. Furthermore, the claimed compound will, by necessity, also contain substituents other than methyl and phenyl for crosslinking purposes. The homologous compound in Koerner clearly satisfies each of (a), (b), and (c). Accordingly, the Examiner remains unconvinced that the instant invention is not anticipated by that reference.

Claims 16, 18, 19, 24, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Schonfelder et al., U.S. patent # 4,444,976. Schonfelder teaches a

composition (bottom of column 2 / top of column 3 and claim 1) for thermoplastics comprising, among other components (1) 10-40 wt. percent of a partially hydrolyzed condensate prepared from an alkyl-substituted trialkoxysilane and 1 to 40% by weight as a fraction of the full weight of the silane reactants of a phenyltrialkoxysilane according to embodiment (b) of claim 1 (2) up to 5 wt. percent of an etherified methylolmelamine, and (3) 0.5 to 30 wt. percent of acetic acid, which one of ordinary skill will appreciate is a catalyst for facilitating the crosslinking of (1) and (2). Other essential ingredients identified therein are colloidal silica, a blocked polyisocyanate, and silanol-terminated polydiorganosiloxane.

The rejections over *Decker et al.* and *Wilt et al.* in view of *Elias et al.* are hereby withdrawn in view of Applicant's amendments and remarks.

***Allowable Subject Matter***

Claims 23, ~~25~~ and 91-92 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 58, 67, and 78 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action.

Claims 10, 44, and 82-84 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Claims 11-12, 45-46, 49, 52-57, 59-66, 68-77, 79-80, 87, 88-90, and 93-94 are allowed.

Priesch et al. and Kirby et al. are cited as being particularly germane to the instant invention by the ISA but fall short of anticipating or rendering obvious its various embodiments. For instance, in Priesch, either the required phenyl content is not expressly contemplated or a blocked crosslinking agent is absent. Kirby does not disclose a crosslinking agent/chain extender though it is noted that the composition is labeled an elastomer. Perhaps crosslinking is promoted by formation of radical moieties in the alkyl substituents when irradiated with light energy. The European reference is in german and must be translated before further comment can be made.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 703-605-1176. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

April 23, 2003



Robert Dawson  
Supervisory Patent Examiner  
Technology Center 1700